

Claims

[1] A surface light source apparatus comprising:
a main body having a space;
a plurality of space division members disposed in the space so that the space division members are extended in a first direction and arranged in a second direction, the space division members being spaced apart from one another to divide the space into a plurality of light emitting spaces, the space division members including a plurality of connecting holes, at least two of the connecting holes having different heights from one another with respect to a bottom surface of the main body, and the light emitting spaces being connected to one another through the connecting holes; and
a visible light emitting unit to generate a visible light in the light emitting spaces.

[2] The surface light source apparatus of claim 1, wherein end portions of the space division members make contact with an inner surface of the main body.

[3] The surface light source apparatus of claim 1, wherein each of the space division members corresponds to each of the connecting holes.

[4] The surface light source apparatus of claim 3, wherein the surface light source apparatus comprises a plurality of space division member groups that are substantially equal to one another, each of the space division member groups includes three space division members disposed adjacent to one another, and three connecting holes of the three space division members have different heights from one another.

[5] The surface light source apparatus of claim 3, wherein the connecting holes are spaced apart from a side surface of the main body by different distances from one another.

[6] The surface light source apparatus of claim 1, wherein the space division members are divided into a plurality of groups, and the heights of the connecting holes of the space division members of each of the groups are substantially equal to one another.

[7] The surface light source apparatus of claim 1, wherein each of the connecting holes is slant toward the first direction.

[8] The surface light source apparatus of claim 1, wherein the main body comprises a first substrate, a second substrate corresponding to the first substrate, and a sealant disposed between the first and second substrates to form the space

between the first and second substrates.

[9] The surface light source apparatus of claim 1, wherein the visible light emitting unit comprises:
a discharge gas disposed in the light emitting spaces to generate a non-visible light;
a fluorescence layer formed on an inner surface of the main body to convert the non-visible light into the visible light; and
an electric source applying part to generate a discharge in the light emitting spaces so as to generate the non-visible light.

[10] The surface light source apparatus of claim 9, further comprising a light reflection layer disposed between a portion of the main body and the fluorescence layer so that the visible light is reflected from the light reflection layer toward the light emitting space.

[11] The surface light source apparatus of claim 10, wherein the electric source applying part comprises a first electrode formed on a surface of the main body and a second electrode spaced apart from the first electrode.

[12] The surface light source apparatus of claim 1, wherein each of the space division members further comprises a discharge gas supplying member disposed in each of the connecting holes so that the discharge gas is introduced into each of the light emitting spaces through the discharge gas supplying member.

[13] The surface light source apparatus of claim 12, wherein the discharge gas supplying member further comprises an impurity gas absorbing member to absorb an impurity gas in each of the light emitting spaces to collect the impurity gas.

[14] A display device comprising:
a surface light source apparatus including:
a main body having a space formed by a first substrate, a second substrate facing the first substrate and a sealant disposed between the first and second substrates;
a plurality of space division members disposed in the space so that the space division members are extended in a first direction and arranged in a second direction, the space division members being spaced apart from one another to divide the space into a plurality of light emitting spaces, the space division members including a plurality of connecting holes, at least two of the connecting holes having different heights from one another with respect to a bottom surface of the main body, and the light emitting spaces being connected to one another

through the connecting holes; and
a visible light emitting unit to generate a visible light in the light emitting spaces;
and
a display panel converting the visible light into an image light having information.

[15] The display device of claim 14, wherein end portions of the space division members make contact with an inner surface of the main body.

[16] The display device of claim 14, wherein each of the connecting holes of the surface light source apparatus is slant toward the first direction.

[17] The display device of claim 14, wherein each of the space division members further comprises a discharge gas supplying member disposed in each of the connecting holes so that the discharge gas is introduced into each of the light emitting spaces through the discharge gas supplying member.

[18] The display device of claim 14, wherein the discharge gas supplying member of the surface light source apparatus further comprises an impurity gas absorbing member to absorb an impurity gas in each of the light emitting spaces to collect the impurity gas.